Extending Immune-Evasive Human Islet-Like Organoids (HILOs) Survival and Function as a Cure for T1D

Grant Award Details

Extending Immune-Evasive Human Islet-Like Organoids (HILOs) Survival and Function as a Cure for T1D

Grant Type: Quest - Discovery Stage Research Projects

Grant Number: DISC2-13213

Investigator:

Name:	Ronald Evans
Institution:	Salk Institute for Biological Studies
Type:	PI

Award Value: $1,523,285

Status: Pre-Active

Grant Application Details

Application Title: Extending Immune-Evasive Human Islet-Like Organoids (HILOs) Survival and Function as a Cure for T1D

Public Abstract:

Research Objective

Determine optimal islet transplant conditions and systemic treatments that promote graft survival upon transplantation into immune-competent diabetic subjects.

Impact

Our proposal will optimize the generation and viability of an unlimited, reproducible source of human engineered islets for transplantation.

Major Proposed Activities

- Demonstrate improved HILO graft survival with FGF1 coating
- Prolong grafted HILO survival by reducing metabolic insulin demand

Statement of Benefit to California: Diabetes affects 3 million people in California. Type 1 diabetes is a particular burden as it requires life-long administration of insulin. Allo-transplantation of islets is limited by availability of donor cells. This proposal will facilitate the generation of functional ESC-derived islet-like organoids as an unlimited, reproducible source and optimize methods to increase functionality and viability upon transplantation into diabetic patients.

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